



# All Hazards Guide



Featuring:

Earthquakes, Landslides, Winter Storms,  
Power Outages, Home Hazard Hunt



## Would you be ready if an earthquake struck today?

If the National Weather Service suddenly announced there would be a major winter storm in two days, would you be in the long lines stocking up on food and water at the grocery store?



If you are able to take action, now is the time. **Act now** or you will be forced to react.

### Be Informed.

Learn the hazards you may face. Make plans to reduce their impacts and get prepared to speed the recovery for your family, business, pets, and livestock.

### Build Kits.

In Lewis County, it is important to be able to be self-sufficient from 3-14 days. Prepare a “**Go Bag**” for quick evacuations, a car kit, and emergency kits for up to 14 days.

### Get Connected.

In a disaster, small communities like Lewis County rely on one another for the first line of help after a disaster. Get to know those around you and discuss how you can help one another.

Your ability to recover from disasters ultimately lies with individuals, families, and organizations. We cannot prevent these disasters from happening, but by being prepared, you can ensure that your recovery, and the long-term impacts to your family and community as a whole are lessened.

*Cover Photos: Left to right: White Pass Highway, East Lewis County, Lacey WA, and Boistfort Valley.*

#### Alert Resources:

#### Want to get connected?

Pick from 52 alternative resources to provide all the information you need. You can receive weather alerts by E-mail, text, phone, and mobile devices just by signing up at [www.weather.gov/subscribe](http://www.weather.gov/subscribe).

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... a Community Notification Program

### What is Lewis County Alert?

Lewis County Alert is a **free** service that allows you to receive notifications about emergencies and other important community information. This system enables us to provide this information in a variety of ways: home/business phone, cell, email, text messages and more. You pick where and how you want to receive messages ... up to 10 different devices.

### What kind of information will I get?

Receive up-to-the-minute Emergency Alerts and follow-up notices on:

- Public safety and health issues
- Water system advisories and concerns
- Emergency road closures and river gage levels
- **Sudden** storms and flood warnings
- Wildfire notifications
- Evacuation notices and instructions

### Who should Sign-up?

All businesses and individuals who are located, work or live in Lewis County that wish to be notified of emergency and disaster incidents should sign up for this robust alert system. If you have a mobile cell phone, our ability to reach and notify you is extremely effective in getting you critical information that informs you of the threat, what we are doing about it, and what we are asking you to do.

### How to Subscribe

To sign-up, go to the Lewis County website at: [www.lewiscountywa.gov](http://www.lewiscountywa.gov). Scroll down the main page and click the Lewis County Alert symbol (shown above). Required information includes your name, address (must be in Lewis County) city, state and zip code. The system allows multiple cell phones and landline numbers.

**Alerts are FREE**  
**No Solicitors will call**

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# The Risks

No matter where you live or work, you are exposed to hazards. Many of these hazards may be known to you, but possibly not well understood. For instance, earthquakes occur without warning and affect everyone in a region within seconds. But the amount of damage depends on many factors such as magnitude, location, and the type of soil under buildings.

By understanding your risk, you can take the steps to minimize or avoid injuries, damage, and long-term financial consequences.

This booklet reviews Lewis County's risks for winter storms, landslides, and earthquakes. Take time now to understand what may occur, and take steps to mitigate your vulnerability and speed recovery.

## Winter Storm Risks:

Winter storms include wind, rain, snow, sleet hail, ice and thunder and lightning. All areas of Lewis County are vulnerable to severe storms. Normally, such weather events occur between October and March, but have been known to occur in early September or as late as June. Lewis County has a probability of at least one major snowstorm every 10 years, and at least one windstorm each year.



Factors contributing to storms in Eastern Lewis County are often different than in Western Lewis County due to the role topography plays.



Physical damages to homes and facilities can occur but basic economy can also be impacted from loss of business due to disruption of the transportation and power systems.

Due to the short duration of weather events (12-36 hours), recovery can be brief if proper preparations are made ahead of time.



## Landslide Risks:

The cool, rainy Pacific Northwest climate ensures that soil moisture levels remain high throughout most of the year, and are often at or near saturation during the wetter winter months. The mountainous terrain and soils types in Lewis County are susceptible to landslides. Generally, there is a medium risk of landslides from November to March.



Frequent weather conditions such as winter storms and flooding also contribute to the risk. The chart of Lewis County Landslides History provides an overview of the frequency and variety of event sizes.

## Earthquake Risks:

Earthquakes are a common occurrence in every state. Washington averages over 1,000 earthquakes a year; most of these quakes are less than 3.5 magnitude and aren't even felt.



Earthquakes cannot be predicted ahead of time and occur day and night; they can also occur in any month of the year. There is no warning. Earthquakes can occur in a small area or strike a large geographic region (from Canada to Mexico) and leave it without communications, power or transportation for weeks or even months.

The effects of an earthquake may vary from not being felt to near total destruction of the physical and economic infrastructure of the area. Although large scale earthquakes occur infrequently (50-300 years), there is no way to tell when or where one will occur.



Large magnitude earthquakes (greater than 6.0) have occurred repeatedly in the Puget Sound region. In 1909, an event estimated to be a 6.0 struck in the San Juan Islands. Other Large events followed in 1939, 1946, 1949, 1965 and 2001. Lewis County had substantial damages in all of these events.



# The Risks cont.

Lewis County's vulnerability to collateral hazards that occur subsequent to a major earthquake also needs to be considered (building collapse, damage to transportation systems, dam failure, rupture of underground utility lines, hazardous material spills, fires). These types of events may add substantially to the amount of damage and time it takes to recover.

## What is needed for you to recover from any of these incidents?

On average, recovery from winter storm damages that are more localized and occur with advanced warning require less preparation. If communications or transportation are effected, they are generally restored within a few hours to a couple weeks.

In a major earthquake, essential services may be lost for weeks or months. Citizens need to be prepared for both events (3-14 days of supplies) and it is recommended citizens consider insurance that covers all these possibilities.

### Can you pay off your current mortgage and have a fresh start without insurance?

Many of these winter storm risks can also result in flooding.

**If you are in or near the Floodplain, consider buying flood insurance.**

Protect your family and your home!

Contact your insurance agent for information.

FEMA programs only provide a minimal assistance.

Typically Washington claimants average less than \$3,000 per claim.

If your home is a complete loss, the maximum is less than \$30,000!

## **\*Lewis County Winter Storms - Earthquakes 1995 - 2009**

<b>Year</b>	<b>High Wind</b>	<b>Snow/Ice</b>	<b>Winter Storm</b>	<b>Earthquake</b>
<b>1995</b>	<b>1 (P)</b>			
<b>1996</b>		<b>1 (P)</b>		
<b>1999</b>			<b>1</b>	
<b>2001</b>				<b>1 (P)</b>
<b>2002</b>	<b>2</b>			
<b>2005</b>	<b>1</b>			
<b>2006</b>	<b>3</b>			
<b>2007</b>	<b>1</b>			
<b>2008</b>			<b>1</b>	
<b>2009</b>		<b>1 (P)</b>		

***\*13 of 29 Total Incidents During This Period***



Recent Lewis County Windstorms		
Date	Event	Impacts
10-12-92	Columbus Day Storm	Most powerful extratropical cyclone recorded in the US in the 20 <sup>th</sup> century. Winds of 78 MPH in Olympia.
01-20-93	Inauguration Day Storm	5 Deaths - 750,000 homes/businesses without power; WA damages \$130 million
12-13-06	Hanukkah Eve Windstorm	Heavy tree damage. PSE reported more than 75% of circuits damaged. 1.2 million lost power.
11-14-10	Severe Windstorm	Toledo School roof damaged. Homes lost in Ashford, Morton, Middle Fork
01-11-14	Severe Windstorm	Lewis County Damages \$240,200.
12-11-14	Severe Windstorm	Lewis County Damages \$361,388.

Lewis County Landslides 1990 - 2017		
Date	Location	Impact
1990 Nov	North Fork of Newaukum River mudslide	Shut down water supply intake to the reservoirs for Centralia and Chehalis
1991 Oct 5	Centralia Seminary Hill	Hillside collapse caused water tank landslide over one million yards of debris pushed into a 10 block residential district.
1994 Nov	Randle. Between Peters and Silverbrook Roads.	\$1.2 million. Entire portion of hill near SR 12 rolled onto highway. Slide was 30 feet high and 100 feet wide.
1999 March	Kresky Ave, Chehalis, Elks Lodge and Golden West Mobile Home Park	Large Mass land movement damaged Lodge and caused removal of 20 mobile homes.
1999	Pe Ell, Wastewater Treatment Plant	Landslide undermined the plant and raw sewage ran directly into the Chehalis River.
2006 Jan	12 County area, including Lewis.	Heavy rain caused landslides over numerous roads, caused \$7.3 million in damages.
2006 Nov 5	SR 508 at Bear Canyon. Road failed and was closed months.	Homes destroyed, impacted state and local transportation infrastructure.
2006 Dec 14	Numerous landslides around County	Hanukkah Eve heavy rains/winds.
2007 Dec 1-3	Pe Ell Boistfort Valley, SR 8, SR 12 and SR 508 near Onalaska	Massive debris flow across SR 6, and over 1,000 landslides in the Chehalis headwaters.
2009 Jan 7-8	Eastern Lewis County.	Morton-Randle debris flows blocked Hwy 12. Over 500 landslides in Eastern Lewis County.
2011 Jan 11-21	Glenoma Area Mead Hill	110 Cubic yards of sluffed debris obstructing the roadway and ditch.
2011 Jan 11-21	Randle Area Siler Road	479 Cubic Yards deposited on roadway and drainage structures.
2011 Jan 11-21	Independence (Rochester Area) Hyppa Road	Two sites: one 12 feet x 6 feet and another 44 feet x 16 feet. Road unsafe and blocked.
2015 Dec	Chehalis Area Logan Hill Slide	120 feet slide created a 3-foot vertical scarp, causing road closure.
2015 Dec	Morton Area Highland Valley Slide	75 feet of bedload damaged 10 feet of culvert beyond repair.
2015 Dec	Ethel Area Howe Road Slide	35 Feet long slide sluffed off toward the adjacent river.
2017 Jan	Toledo Area Salmon Creek Slide	630 foot slide, with 3,609 tons of debris in the roadway, closed indefinitely.



# Winter Storms

## Winter Storms – A variety of conditions

Severe winter storms can have a tremendous impact on people, animals and communities. Extreme cold can combine with snow, ice or sleet, high winds, thunder and lightning. Winter storms can last for days.

Roofs may collapse due to the weight of snow and trees can knock down power lines causing a heat loss to homes and businesses. Dangerous driving conditions can leave travelers stranded on the road. Animals are also at risk during severe winter weather. Unprotected livestock may be lost.

Severe thunderstorms are dangerous and can cause other hazards such as flooding, human injuries, building fires, and electrical damage. High winds can overturn cars, uproot trees and blow down utility poles.

Preparing before the storm can help you protect your family, pets, livestock, and property.

### Before a Winter Storm

- Register to receive **Lewis County Alert** notifications at: [www.lewiscountywa.gov](http://www.lewiscountywa.gov).
- Stay informed. Monitor severe winter weather in the area by registering to receive NOAA National Weather Service notices at: [www.weather.gov](http://www.weather.gov).
- Obtain an NOAA Weather Radio with a display.
- Prepare emergency kits for each family member, include pets and livestock.
- Have a family communications plan with an “out-of-area” contact.
- Know the safest location for shelter in your home, workplace and school.
- Identify potential hazards on your property and mitigate them (remove leaning trees, repair fences, pick up tools and scrap materials).
- Try to create a safe place for your pets and desensitize them to loud noises.
- Prepare your car for winter.
- Have a personal survival kit in our car.
- Stock up on pet and livestock foods.
- Winterize any building that may provide shelter for your livestock.
- If you have a business, have plans for your employees and customers.

### During a Winter Storm

- Stay informed. Listen to local radio as the situation develops.
- Don’t travel during the storm period if at all possible. If you must travel, do so in the day time and on main roads. Tell others your route and schedule.
- Gather supplies together. Be prepared for power outages that keep you home for several days.
- Bring pets indoors well in advance of the storm.



- If you lose power or heat and don't have a back-up heat option, go to a designated public shelter.
- Use battery-powered flashlights or lanterns not candles.
- Stay off the phone unless it's an emergency. Only call 9-1-1 for live-saving emergencies.
- If outside during a lightning storm, avoid anything metal and natural lightning rods, i.e., tall isolated trees, hilltops, isolated structures in open areas. Make yourself as low to the ground as possible and get on the balls of your feet.
- If inside during a lightning storm, avoid anything corded, phones and plumbing.
- If you have a business, enact your employee and customer safety plans.

### After a Winter Storm

- Check the area for downed power lines and other hazards.
- Report any downed power lines.
- Check on neighbors to see if they need help.
- Assess your animals and building structures.
- Keep pets and children away from storm damaged areas.
- Contact your insurance agent to report any losses and obtain advice about restoration needs.
- If you need to make immediate repairs, take pictures to document for insurance, FEMA or other claims.
- Clean up safely, wear sturdy shoes/boots, long sleeves, and gloves.
- Check with health authorities for proper animal carcasses disposal methods.
- Report any hazardous materials to emergency response personnel.



### Special Circumstances

- If freezing for several days, leave all water taps slightly open so they drip continuously.
- Determine a back-up heating source in case the power goes out. Install a smoke detector and a battery-operated carbon monoxide detector near the area to be heated.
- If stranded in your car, stay calm, turn on hazard lights, tie distress flag (red) on antenna or window; do not leave the car unless it will improve your chances.

#### Inclement Weather Notices . . . . National Weather Service Terms

<b>Watch</b>	Issued when a system may or is developing. Prepare for the possibility of an event.
<b>Warning</b>	Issued when an event is certain or is already occurring.

# Landslides (mudflows)

## What is a Landslide and a Mudslide?

In simple terms, a landslide is a massive movement of rock, soil, debris or earth material downwards along a hill or slope due to the force of gravity. A mudslide on the other hand, is a fast-moving landslide usually along a channel or canal.

Landslides occur everywhere, although some places are more prone to it than others. They can be caused by earthquakes, storms, volcanic eruptions, fire and man-made modifications to land. Landslides can often occur with little notice. They develop when water rapidly accumulates in the ground, during heavy rainfall or rapid snowmelt. They can flow rapidly, striking with little or no warning at avalanche speeds.

The best way to be prepared is to stay alert to any changes around your home/business that could signal that a landslide is likely to occur.

## Recognize Landslide Warning signs

- Changes in landscape patterns of storm-water drainage on slopes, small slides, or progressively leaning trees.
- Doors or windows stick or jam for the first time.
- New cracks appear in plaster, tile, brick or foundations. Outside walls, walks, or stairs begin pulling away from the building.
- Bulging ground appears at the base of a slope.
- Fences, utility poles or trees tilt or move.

## Before a Landslide

Here are some tips you can do to protect yourself and your family:

- Prepare an emergency kit and have a family communications plan.
- Avoid building near steep slopes, close to mountain edges, near drainage ways or along natural erosion valleys.
- Learn whether debris flows have occurred in your area.
- Protect your property by planting ground cover on slopes and building retaining walls.
- In mudflow areas, build channels or deflection walls to direct the flow around buildings.

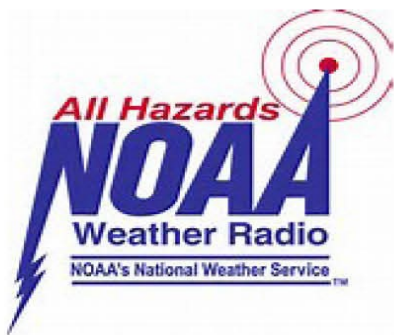
## During a Landslide

- Listen for unusual sounds that might indicate moving debris, such as trees cracking or boulders knocking together.
- Look upstream before crossing a bridge. Mudflows can move faster than you can walk or run.
- Avoid river valleys and low-lying areas during heavy rainfall.
- If near a stream or channel, notice water changes from clear to muddy. This can mean debris flow upstream.
- Listen to local news stations on a battery-powered radio for warnings of heavy rainfall.



## After a Landslide

- Listen to local radio or television stations for the latest emergency information.
- Watch for flooding. Floods sometimes follow landslides, and they may both be started by the same event.
- Check for injured or trapped persons near the slide, without entering the direct slide area. Direct rescuers to their locations.
- Look for and report broken utility lines.
- Check building foundations, chimneys, and surrounding land for damage.
- Replant damaged ground as soon as possible since erosion can lead to flash flooding and additional landslides.
- Seek the assistance of a professional to advise you of the best ways to prevent or reduce landslide risk.



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### NOAA Weather Radio

Weather Radios are an important preparedness tool for homes, businesses, government offices and schools.

NOAA Weather Radio broadcasts the latest area weather forecasts on the public service band. These frequencies are not found on a typical home radio. Weather radios can be purchased at local electronics stores, starting at about \$30.

Look for these features: Weather radios are available both with and without a warning alarm feature. They can be programmed to alarm only the warning message you want.

It is strongly recommended citizens have a radio with Emergency Alert System (EAS) capability (also known as SAME – Specific Area Message Encoder).

Lewis County SAME Code: 05041  
Frequency: 162.475 for most of Lewis County  
Morton and Beyond (upper Cowlitz Valley) also try 162.425

**Find current Lewis County Road information:** Lewis County website at: [www.lewiscountywa.gov](http://www.lewiscountywa.gov). Scroll down the main page and click “Road Conditions” near the center of the page.



# Earthquakes

## What is an Earthquake?

Earthquakes are the rumblings, shaking or rolling of the earth's surface. It is usually what happens when two plates of the earth's crust suddenly slip past one another, or break apart from each other as a result of tension caused by prolonged energy build up. It can be felt as a shock under your feet, or may be very powerful and destructive enough to flatten an entire city. They can happen anywhere, land or sea.

All natural disasters are frightening, but what makes **earthquakes** unique is that **they give no warning**. Therefore it is important to be prepared before they strike and have a plan for what to do during and after an earthquake.

## Before an Earthquake

- Make a Preparedness Kit for at least 14 days. The kit should be comprised of water, food, medications, first-aid kit, bandages, flashlight, batteries, a radio, thermal blankets, and other personal items.
- Make a plan with your family on where to meet after the earthquake happens.
- Learn the earthquake plan at your school or workplace.
- Know your environment and buildings and make a plan for where you will take cover.
- Get a fire extinguisher; learn how to use it.
- Learn how to turn off the water, gas and electric in your home (you may need a multi-function tool for this).
- Identify and reduce possible hazards in your home.
- Secure heavy items to the wall (shelves, bookcases, mirrors, light fixtures).
- Move heavy objects to the bottom of shelves so they don't fall on you.
- Never hang anything heavy above where you sleep.
- Know a safe place in each room of your house to take cover from windows that could shatter or furnishings that could fall (it's best to have something sturdy to hold on to or something you can lay up against for protection).
- Practice the **"Drop, Cover, and Hold"** drill with family members so everyone knows what to do and where to go in each room.

## During an Earthquake

- **Stay Calm!** If you are indoors, stay inside. If you are outside, stay outside.
- As soon as you feel shaking, drop to the ground, get under something if possible and hold on until the shaking stops (**Drop, Cover, and Hold**). If there is nothing to get under, cover your head and neck with your arms. Stay away from windows, outside doors.
- In general, stay where you are until the earthquake is over. Do not run away or go outside; that creates a risk from flying objects, debris, or falling over something.
- Stay clear of windows.
- If you are outside, move away from buildings, street lights, utility wires and overpasses.
- If you are in a car, stop the car and stay inside until the earthquake stops.



## Unusual Locations

- **Kitchen** – Move away from the refrigerator, stove and overhead cabinets.
- **Bed** – If unable to get to the ground, cover your head and neck with your arms/pillow.
- **Downtown Area** – on a sidewalk or near a tall building get into the doorway or lobby.
- **Crowded Store or Public Place** – Do Not Rush exits, move away from display shelves and **Drop, Cover, and Hold**.
- **Theater** – stay in your seat and protect your head with your arms or get under the seat. Do not attempt to leave until the shaking stops.
- **Wheelchair** - stay in it! Get to a safe cover, even a doorway, lock the wheels and protect your head with your arms.

## After an Earthquake

- Once the shaking has stopped, leave the building or house you are in and retreat to an open space away from damaged areas.
- If you are trapped, use whatever communication you have in order to get the attention of rescuers. It may be a cell phone, whistle, or tapping on a wall.
- **Don't use elevators** (they'll probably get stuck).
- Use battery powered flashlights. **Don't use matches**, candles, or any flame. Broken gas lines and fire don't mix!
- Check yourself and others for injuries. Provide first aid.
- Check water, gas, and electric lines for damage. If damaged, shut off the valves. Check for the smell of gas. If you smell it, open all the windows and doors, leave immediately, and report it to the authorities (use someone else's phone).
- Turn on the radio.
- Make contact with your out-of-area contact to let them know you are alright. Don't use the phone unless it's an emergency.
- Wear boots or sturdy shoes to keep from cutting your feet on broken glass and debris.
- Be careful of chimneys (they may fall).
- **Stay away from beaches**. Tsunamis sometimes hit after the ground has stopped shaking.
- Expect aftershocks.

For more detailed information on these risks and other hazards, refer to the Lewis County Hazard Identification and Vulnerability Analysis (HIVA), 2018 located on the Emergency Management website at: [www.lewiscountywa.gov/em](http://www.lewiscountywa.gov/em).



# Why Drop, Cover & Hold?

Most earthquake related injuries and deaths are caused by collapsing walls and roofs, flying glass and falling objects. It is extremely important for a person to move as little as possible to reach a safe place because most injuries occur when people try to move during the shaking.

If you are inside a building, move no more than a few steps, then **Drop, Cover and Hold on**:

- **DROP** to the ground (before the earthquake drops you!)
- Take **COVER** by getting under a sturdy desk or table, and
- **HOLD ON** to it until the shaking stops

## Consider Your Options Now

Look around you now, before an earthquake. Identify safe places such as under a sturdy piece of furniture or against an interior wall way from windows. Do this in every room of your home and other places you spend time such as at work. Thinking about what you would do before the incident occurs gives you a head start on taking action.



## Practice the “Drop, Cover, Hold” drill

To react quickly you must practice often. You may only have seconds to recognize the earthquake and take action to protect yourself before strong shaking knocks you down, or drops something on you.

*Practice helps you to be ready to respond.*

Everyone, everywhere should practice earthquake safety. On the third Thursday of October, Washington State promotes the statewide “**ShakeOut**” program encouraging all citizens to take part in a “**Drop, Cover, Hold**” Drill. Local radio and television stations will announce the drill at the same time as the date of the third Thursday in October (for 2018 this is 10:18 a.m.). This program provides an opportunity for everyone to “**Drop, Cover and Hold.**” Even though the International **ShakeOut Day** is the third Thursday in October, you can drill on any day!





# Power Outages

Power outages can occur from a variety of situations and can last for prolonged periods of time. This presents unique challenges in the home and insuring your family's safety. Taking preparedness actions now can help keep everyone safe and comfortable.

## Before a Power Outage

- Prepare an emergency supply kit for 3-14 days  
Food, water and necessities for all the family.  
Battery radio, flashlights.  
First Aid kit, medications.  
Sleeping bag, blankets, extra clothing.  
Emergency contact numbers.  
Food thermometer.
- Have family communications and evacuation plans.  
Know how you will contact each other.  
Have an out-of-state contact for everyone to call.
- Protect electrical equipment.  
Install surge protectors for sensitive electronic equipment (computers).



## During a Power Outage

- Stay informed; Decide whether to stay or go.  
It may be best to remain at home (temporary outage) or evacuate (power outage in winter with loss of home heat).  
If driving to another location, be alert for traffic lights that are not working.
- Backup Power  
Only use generators in well-ventilated areas.  
Use battery-operated light sources (no candles or open flames).  
Never use gas ovens/ranges, BBQs or propane heaters for indoor heating.
- Protect electrical equipment  
Turn off /unplug electronics/appliances to avoid spikes when power is restored.  
Leave one light on so you'll know when power returns.
- Keep your food supply safe  
If you have been without power for over 48 hours, do not eat any of the food in your freezer.  
Check the temperature of any and all food before you cook or eat it. Throw away any food with the temp higher than 40 degrees or out of the fridge for longer than 2 hrs.

**When it doubt, throw it out!!!**

## Water purification systems may not be fully functioning during power outages.

- Check with local authorities to be sure your water is safe to drink.
- If your water is not considered safe, boil or treat any water used for drinking, cooking, washing dishes, brushing teeth, washing and preparing food, washing your hands, making ice, or preparing baby formula.
- Safe water includes bottled, boiled or treated water.

# Information & Safety Messages

## Winter Storms

The time to prepare is before the snow falls and ice forms. Know the National Weather Service alerts. A “Watch” means severe weather may affect your area. A “Warning” means it is in your area or is expected imminently.

- Fill your gas tank before the snow falls.
- Have an emergency auto kit readily available.
- Have a NOAA Weather Radio, and listen to your local AM/FM radio for the latest updates.

## Traveling in inclement weather? (Before entering the roadway)

- Check antifreeze and coolant levels before the season arrives.
- Make sure your tires have good tread and are properly inflated.
- Turn on your windshield wipers, defroster, and low beam headlights.
- In fog, if you see a patch of fog ahead, slow down before you reach it. Be alert to slow moving vehicles and traffic stopped ahead. In heavy fog, roll your windows down. You may actually hear other cars before you see them.
- In snow, try to drive in the tracks of the car ahead, reducing your speed to allow additional stopping distance.
- If your car hydroplanes, keep the steering wheel straight; take your foot off the gas. Do not hit your brakes or try to steer. As your speed slows, the weight of the car will cause the car to settle down onto the road again.

## Lightning Storm Precautions:

Lightning is the nation’s #2 storm killer. Use the 30-30 rule to stay safe. If there is less than 30 seconds between lightning and its thunder, go inside. Stay inside 30 minutes or more after the last rumble of thunder is heard.

- Stay indoors or in your car until the storm passes.
- Do not use the phone or other electrical equipment including televisions and computers.
- Avoid plumbing fixtures and appliances. Do not use faucets or showers.
- If your hair stands on end, drop to your knees, bend forward, and put your hands on your knees (do not lie flat).

## Power Outages:

Electrical surges can damage your electrical appliances when the power is restored. These simple precautions will protect your valuables from sudden electrical surges when the power is restored.

- Place electrical appliances, including television sets, on surge protectors.
- Train all family members to go through the house and turn off all computers and electrical appliances before going to bed or leaving the home.
- If there is a sudden loss of power, turn off all but one light so you’ll know when power is restored.



## Reporting Power Outages

If your power is out, report it to your utility company **once**. Power is restored from the main roads out to the secondary roads. The farther you are from the main station, the longer it will take to restore your power. Be patient.

- **DO NOT call 911** unless there is a life threatening emergency.
- Those with medically fragile conditions may want to consider staying with family or friends out of the impact area.

## Flood-Prone Areas - Make a Plan

If you live in a flood-prone area, make food, water, and heat preparations to stay in your home or plan your evacuation route now. Know which roads to use and when you need to leave home. Don't walk or drive through flooded areas. Moving water 6 inches deep can sweep you off your feet. Two feet of rapidly moving water can wash your car off the road. Don't forget to have plans for care of your pets.

## FLOODING - Here are some frequently asked questions and answers:

### How do most Lewis County flood deaths occur?

Most Lewis County flood deaths are vehicle related. Three people attempting to drive thru flood waters died in the 1990 flood. Two people were washed into the river trying to escape raging flood waters in the 2006 East Lewis County flood. Two people drowned in the 2007 floods when they lost control of their car and it over-turned into a ditch. Floods kill more people in the US than other type of severe weather. Leave the area before it becomes dangerous or stay put! When you approach a flooded road, **TURN AROUND, DON'T DROWN!**

### How can I know what flood levels to expect for the property I just purchased?

Remember, flooding events are made up from many influencing factors and are difficult to predict accurately. The best way to access the future level of flooding in your area is to talk with long-term neighbors to see what they remember of past flood events. You can also obtain information about flooding from your local building department.

### What's this 100-year Flood Level I keep hearing about?

The 100 year flood level does not mean a measurable level but only the probability that there is a 1% chance in any given year that a flood of that level is likely to occur. Frequently in our history, 100-year flood levels have been reached or exceeded for up to 5 years in a row! Also, as flooding becomes more severe, the flood levels are recalculated. That means a flood event from the past that might have then been a 100 year flood level when it occurred, may today be rated as only a 85 year level.

**Remember this: Every flood event is different.** Every effort is made to evaluate the past history, current factors and generally known conditions to provide a "prediction" of what to expect. However, it is **only a prediction** to help you know when to take action. **Water may go where it never flooded before.** Stay vigilant during inclement weather situations. Be prepared and ready to take action as needed.



# Department of Emergency Services Message

## It's Time to Enhance the Preparedness Message

In light of the ever increasing devastation brought on by recent natural disasters such as tornadoes, hurricanes earthquakes and the Lewis County historic flood events of 2006 and 2007, we need to reevaluate our preparedness message. The current message of **“Get a Kit, Make a Plan, and Stay Informed”** is missing something. If you take a close look at what is being promoted, you will find it's almost entirely focused on personal safety and survival. These topics are extremely important to prevent immediate loss of life and staying safe, but there is a critical piece missing relating to the long-term effects and outcome of disasters.

Have you wondered why so many homes that are damaged never get rebuilt? Why are there so many foreclosures and families who become displaced? What happens when you don't have adequate insurance or FEMA can't give you enough to make your home livable again? What if your life savings is in the equity of your home and you can't afford to pay for repairs?



This message is for everyone who wants to do something more and be part of something bigger to ensure not only their family but also their community is prepared, resilient and can recover quickly from disasters. **“Resilience”** means the ability to recover, rebound, and come back stronger than before. Getting a kit and stockpiling supplies is an individual responsibility that plays into the overall community well-being. To better promote a whole resilient community approach, I challenge you to be a part of a community-wide strategy and plan for recovery.





Here are 10 ways you can prepare and strengthen your plan for your family and community's success in recovering from disasters:

1. Assess your risks and take steps to protect your property by correcting drainage problems and creating defensible space.
2. Get adequate insurance to replace your home and contents, whether you rent or own.
3. Research the possibility of opening a home equity line of credit that you can use to make repairs after an emergency. Banks typically won't loan money on a home that is heavily damaged, so having money available before the event can really help.
4. Make a list of local contractors, roofers, and other disaster restoration providers you know to call when you need one.
5. Have a plan on where to stay if your home is unlivable.
6. Find out what it takes to get your utilities restored if your electric or gas is shut off or the meters removed.
7. Talk to those who have gone through a disaster before and jot down the lessons they learned so you can avoid those mistakes.
8. Make copies of your home building plans and get estimates of what it would cost to rebuild your home.
9. If you have insurance and run into problems, visit United Policyholders and their Claims Help Library at <http://www.uphelp.org/resources/claim-help>.
10. Make copies of important or irreplaceable items such as family photos, recipes, citations, and store them in the cloud, in a safe place off site, or on a thumb drive.



Take an active role in your preparedness safety with an eye toward recovery and resiliency!

*Steve Mansfield,*  
Director

Lewis County  
Emergency Management



# Home Hazard Hunt

## Identify Potential Home Hazards

All Washington State and Lewis County has the potential of being impacted by a major earthquake, winter storm or flood. Earthquakes strike suddenly and without warning. When they occur, they cause the ground to undulate and shake, perhaps violently. Buildings – and their contents – are vulnerable to this rocking and rolling. Experts teach how to secure homes to foundations and contents to wall studs.

Generally there is some warning before a flood. Store chemicals, solvents and poisons above known flood levels and make sure they are in secure containers so they don't get into the flood waters and contaminate your home and neighborhood.

## 30 Minute Hazard Hunt

**Take 30 minutes now to walk through your home to identify possible hazard risks.** Follow-up by taking recommended steps so you don't have to worry later!

1. Check your water heater. Is it securely fastened to the wall studs with heavy-metal strapping, top and bottom? If not, visit [www.ready.gov](http://www.ready.gov) for instructions to secure it.
2. Tall furniture is especially vulnerable to earthquakes. Identify each bookcase, china hutch, and armoire that needs fastening to the wall. Go to [www.ready.gov](http://www.ready.gov) for instructions on securing tall furniture.
3. Look for heavy or breakable objects on high shelves. Pay special attention to objects with sentimental value. Move heavy objects to lower shelves. Go to [www.ready.gov](http://www.ready.gov) for suggestions on how to secure your valuables. Lewis County residents who have done this, reported no damage losses after the 2001 Nisqually earthquake!
4. Identify computers, stereos, televisions, microwaves and other small appliances that need to be secured and protected from power surges after an earthquake or power loss. Go to [www.ready.gov](http://www.ready.gov) for suggestions on how to protect and secure small appliances.
5. Identify poisons, toxins or solvents and place them in unbreakable containers and move above areas that might flood. Visit [www.ready.gov](http://www.ready.gov) for suggestions for storing chemicals.
6. Identify mirrors, heavily-framed pictures, and framed artwork that needs to be secured to wall studs. (Pay special attention to heavy pictures, etc. over beds and move these). Visit [www.ready.gov](http://www.ready.gov) for ideas on how to secure artwork.
7. Identify kitchen, bedroom and garage cabinets that need to be secured to keep their contents inside during an earthquake. Visit [www.ready.gov](http://www.ready.gov) for ideas on how to secure cabinets.
8. Inspect the foundation of your home. Is your home securely fastened to it? Check with the local building department for regulations and suggestions for securing foundations.